AMENDMENT

In the Claims:

Kindly cancel claims 1-23 without disclaimer or prejudice to prosecution in a related application. Please add the following new claims:

Sub B'

24. (New) A method of introducing a nucleic acid encoding a desired molecule into cardiomyocytes which comprises:

infusing a recombinant adeno-associated virus (AAV) vector into a coronary artery or a coronary sinus for a time and in an amount sufficient to stably and efficiently transduce cardiomyocytes perfused by said artery or said sinus, wherein said AAV vector comprises at least one nucleic acid operably linked to a control region, said nucleic acid encoding said desired molecule.

25. (New) The method of claim 24, wherein said AAV transduces at least about 10% of said cardiomyocytes.

26. (New) The method of claim 24, wherein said AAV transduces at least about 40% of said cardiomyocytes.

27. (New) The method of claim 24, wherein said AAV transduces at least about 50% of said cardiomyocytes.

28. (New) The method of claim 24, wherein said AAV is infused for at least about 2 minutes to about 30 minutes.

29. (New) The method of claim 24, wherein said AAV is infused for at least about 5 minutes to about 20 minutes.

30. (New) The method of claim 24, wherein said AAV is infused for about 15 minutes.

31. (New) The method of claim 24, wherein said amount of AAV is about 1 x 10^5 IU AAV per gram body weight to about 1 x 10^9 IU AAV per gram body weight.

32. (New) The method of claim 31, wherein said amount of AAV is about 1 x 10^6 IU AAV per gram body weight to about 1 x 10^8 IU AAV per gram body weight.

33. (New) The method of claim 32, wherein said amount of AAV is about 6 x 10^7 IU AAV per gram body weight.

34. (New) The method of claim 24, wherein about 1 x 10^5 IU AAV per gram body weight to about 1 x 10^9 IU AAV per gram body weight is infused for about 2 to about 30 minutes.

35. (New) The method of claim 34, wherein about 1 x 10^6 IU AAV per gram body weight to about 1 x 10^8 IU AAV per gram body weight is infused.

36. (New) The method of claim 35, wherein about 6 x 10^7 IU AAV per gram body weight is infused.

37. (New) The method of any one of claims 34, 35 or 36, wherein said AAV is infused for about 5 to about 20 minutes.

38. (New) The method of any one of claims 37, wherein said AAV is infused for about 15 minutes.

39. (New) The method of claim 34, wherein about 6 x 10^7 IU AAV per gram body weight is infused for about 15 minutes.

40. (New) The method of claim 24, wherein said coronary artery is infused *ex vivo* or *in vivo*.

41. (New) The method of claim 24, wherein said desired molecule is an anti -sense RNA or a protein.

42. (New) The method of claim 24, wherein said desired molecule is an ion channel gene, a contractile protein, a phospholamban, a β adrenergic receptor, a β adrenergic kinase, a growth factor, an angiogenic factor, a protein or nucleic acid capable of inducing angiogenesis, or a protein or nucleic acid capable of inhibiting angiogenesis.

43. (New) The method of claim 24, wherein said desired molecule is FGF-1, FGF-2, FGF-5, VEGF, or HIF-1.

44. (New) The method of claim 24, wherein said desired molecule is thymidine kinase, p21, p27, p53, Rb or NF-κB.

45. (New) The method of claim 24, wherein said cardiomyocytes are in an individual having a vascular condition selected from the group consisting of restenosis, atherosclerosis, congestive heart failure, ischemic cardiomyopathy, malignant arrhythmia, myocardial infarction, congestive heart failure, and dilated and hypertrophic cardiomyopathy.

46. (New) The method of claim 24, wherein said desired molecule has an effect selected from the group consisting of inducing angiogenesis, inhibiting angiogenesis, stimulating or inhibiting cell proliferation, treating restenosis, treating atherosclerosis, treating congestive heart failure, treating ischemic cardiomyopathy and treating malignant arrhythmia.

REMARKS

Claims 1-23 were pending in the application. Claims 1-23 have been canceled, and new claims 24-46 are submitted herewith. Upon entry of the foregoing amendment, claims 24-46 will be pending in the application. The new claims find support in the originally filed claims, which they closely parallel, as well as throughout the Specification where it is taught that the AAV